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# A STUDY ON THE IMPACT OF PHYSICAL MOBILITY ON COGNITIVE DECLINE AND DEPRESSION AMONG INSTITUTIONALISED ELDERLY

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**A STUDY ON THE IMPACT OF PHYSICAL MOBILITY ON COGNITIVE  
DECLINE AND DEPRESSION AMONG INSTITUTIONALISED ELDERLY**

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Currently, the journal's Achievement is becoming a major international research journal editors and thesis research. We acquire, develop, market and distribute the knowledge through the dissemination of academics and practitioners from around the world. The journal published by maintains the highest standards of quality, integrated newsrooms by researchers around the world.

At last, I would like to thank *RED'SHINE Publication, Pvt. Ltd.* for this keepsake, and my editorial team, technical team, designing team, promoting team, indexing team, authors and well wishers, who are promoting this journal. As well as I also thankful to *Indian Psychological Association* and President *Prof. Tarni Jee* for gives review team, I also thank you to all Indian Psychological Association members for support us. With these words, I conclude and promise that the standards policies will be maintained. We hope that the research featured here sets up many new milestones. I look forward to make this endeavour very meaningful.

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## ABSTRACT

The current study was undertaken for the purpose of studying the impact of physical mobility, cognitive decline and depression among institutionalised elderly. The study also focused on the influence of demographic variables such as age, sex, education, marital status and residential area of the institutionalised elderly. The population of this research was comprised of 150 institutionalised elderly from Missionaries of Charity home, Coimbatore, Tamilnadu, India. Purposive sampling method was used for the selection of respondents. Physical Mobility was measured with a self report Elderly Mobility Scale (EMS) Version – 2 developed by Smith (2000), Cognitive decline was measured with a self report Global Deterioration Scale developed by Dr. Barry Reisberg (2005), Depression was measured with a self report Geriatric Depression Scale developed by Sherry. A. Greenberg (2005) were the three questionnaires used in this study. Questionnaires were administered to collect primary data. Physical mobility, Cognitive decline and Depression were taken as variables under study.

Analysis of data was carried out by applying SPSS 21.0. ANOVA and correlation tests were carried out to establish the relation among variables. The results also revealed significant relationship between physical mobility, cognitive decline and depression. Examination of results also shows that demographic variables influence physical mobility, cognitive decline and depression of the institutionalised elderly. This study has great value for the institutions and elderly to understand the physical and psychological wellbeing of elderly.

**Keywords:** *Physical Mobility, Cognitive Decline, Depression, Institutionalised Elderly.*

## INTRODUCTION

*“My son always forget things from childhood,  
Now he forgot to build a room for me in his new bungalow”*

Old age consist of ages nearing or surpassing the average lifespan of human beings, and the thus the end of the human lifecycle. Euphemisms and terms for older people include seniors – Chiefly a usage of Elderly. Older people have limited regenerative abilities and are more prone to disease, syndromes and sickness than other adults (Achete, K., & Karha, E 2009). The medical study of the ageing process is gerontology, and the study of disease that afflicts the elderly is geriatrics.

## MENTAL HEALTH IN LATE ADULTHOOD

Some elder individuals lose the ability to cope with the demands and complexities of everyday life. The following sections examine the impact of this loss of coping ability on older adults. Their family and friends, and rest of the society (Ausubel, D.P 2014). A breakdown in coping strategies and the loss of the ability to function psychologically are two important hallmarks of mental disorders. The importance of understanding and treating mental disorders in older adults has been captured in Seymour Ket’s foreword to the handbook of mental health and ageing (1980).

## OLD AGE HOMES

The decision to institutionalize an elderly parent or relative resents many conflicts. It often follows a number of years of trying to handle the increasing physical and emotional demands of care giving (George, 1992). Care giving by family members for a disabled older relative is a natural response to an immediate need for assistance (Gatz et al., 1990). Care givers are assumed to be motivated by altruistic reasons, social norms and self serving motives, which include avoidance of guilt, fear of public censure, or a sense of indebtedness (Gatz & Schultz, 1991). Yet, the direct consequences of accepting the responsibility to care for an impaired or disabled elderly relative are rarely understood until care giving is well underway (George, 1992). Care giver burden, which includes the negative impact on physical health and finances, as well as the diminished time and involvement in friendship, leisure activities and the larger community, is simply difficult to anticipate. Evidence in recent mental health studies suggest that care givers of impaired older adults are increasingly at risk of mental health problems such as depression (Clipp & George, 1990).

## COGNITIVE DECLINE

Cognition refers to the collection of process that serves to transform, organize, select, retain and interpret information. The study of normal age related changes in cognition is one of the most active areas of research in the Psychology of adult development and ageing (Cerella, J., & Poon 2001).

## PHYSICAL MOBILITY

The orderly or regular changes that occur with time in mature, genetically representative organism living under representative environmental conditions is defined as “Ageing” (Birren, 1988). The physical, neutral and sensory changes that occur during the adult years is important to distinguish the process of normal ageing from the consequences of particular disease and poor health in later life. Normal ageing or Senescence, refers to the time related biological processes that affect all persons, whereas diseases, such as heart disease and Alzheimer’s disease affect some individuals and not others, some disease are more common in later life than in earlier period of development, but their effects are distinct from normal

ageing. The Alzheimer's disease and other dementias that affect subgroups of older adults. Although some aspects of effective biological functioning are impaired in later life, the declines associated with normal ageing are relatively mild and occur more gradually compared with the nature and extent of impairment associated with disease and poor health in late life (*Gatz, M., Smyer 1999*).

### **DEPRESSION IN OLD AGE**

The actual incidence of depression among older adults varies widely since different methodologies, samples, nationalities, and criteria have been employed in research studies (*Anthony & Aboraya, 1991*). There is some agreement that about 4 to 7 percent of the elderly experience depression serious enough to require intervention. Initially noted that the highest rates of depressive symptoms appear among those older than 65; yet the frequency of depression as a psychiatric diagnosis is highest among those 25 to 65 years of age. Some of the inconsistency in the research relating age and incidence of depression has been related to the variety of scales used to screen for symptoms.

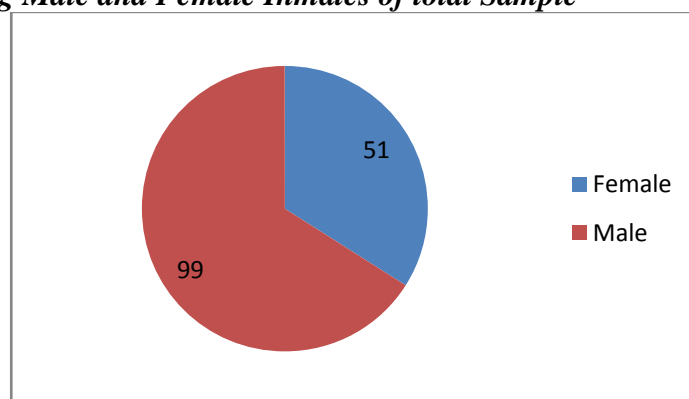
## METHODOLOGY

In this study an attempt was made to examine cognitive decline and depression among institutionalized elderly due to physical mobility. From the review of literature we understand that these variables are being influenced by the mobility of institutionalized elderly. An attempt is also made to study the influence of demographic variables such as age, marital status, and gender, educational qualification on the mobility, cognitive decline and depression of the institutionalized elderly. In this chapter of methodology of the study, participants, measurement tools, informed consent and confidentiality, data collection procedure, data analysis tool and research process are presented.

## PARTICIPANTS

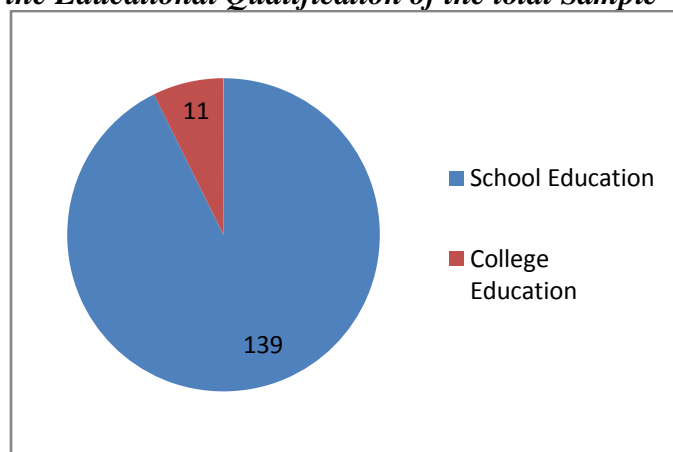
One hundred and fifty institutionalized elderly ( $N = 150$ , women and Men) in Missionaries of Charity ( Mother Teresa Home), Coimbatore , Tamilnadu, India, was purposively selected as sample for this study. Total female were 99 respondents comprising 34%, and total male sample were 51 comprising 66% of the sample.

**Figure 3.1 Showing Male and Female Inmates of total Sample**



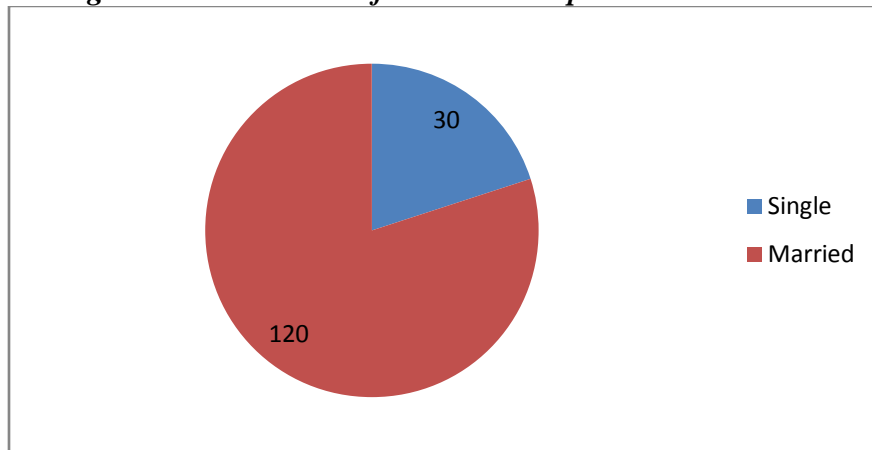
In the overall sample, 51 comprising (34%) are female and 99 comprising (66%) are Male.

**Figure 3.2 Showing the Educational Qualification of the total Sample**



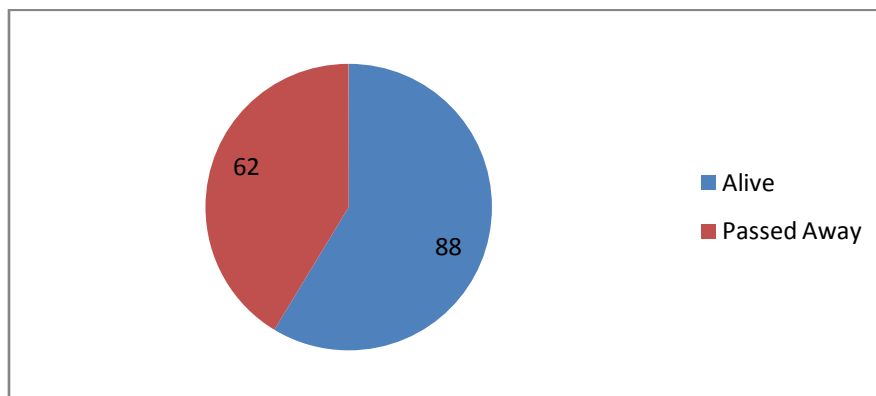
In the overall sample, 139 comprising (93%) studied upto school education and 11 comprising (07%) completed college education as Under- Graduate and Post- Graduate.

**Figure 3.3 Showing the Marital Status of the total Sample**



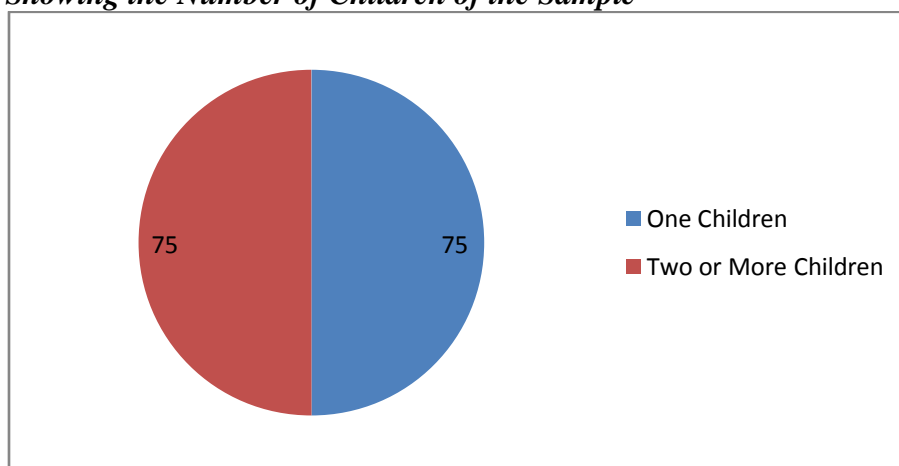
In the overall sample, around 120 comprising ( 80%) are married, and 30 comprising (20% ) are single.

**Figure 3.4 Showing the Spouse Status of the total Sample**



In the overall sample, around 88 comprising (59%) Spouse is alive, and 62 comprising (41%) spouse are passed away.

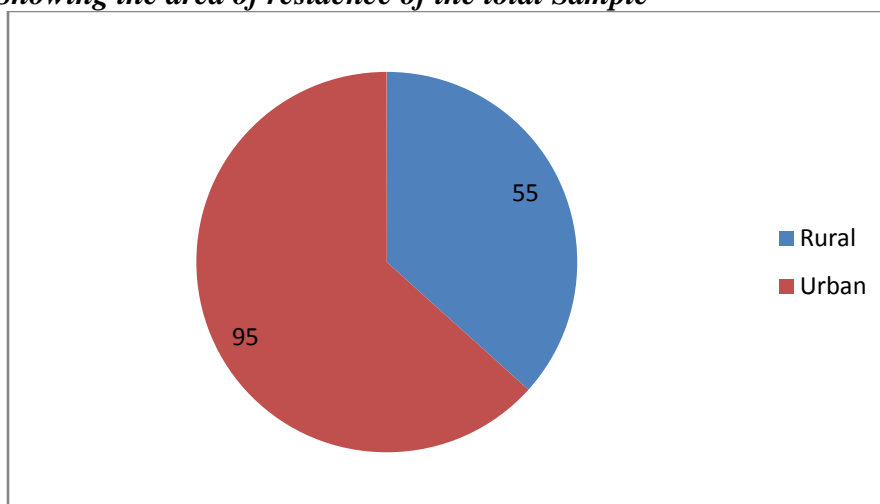
**Figure 3.5 Showing the Number of Children of the Sample**



In the overall sample, around 75 comprising of (50%) having One Children, and 75 comprising of (50%) have two or more Children.

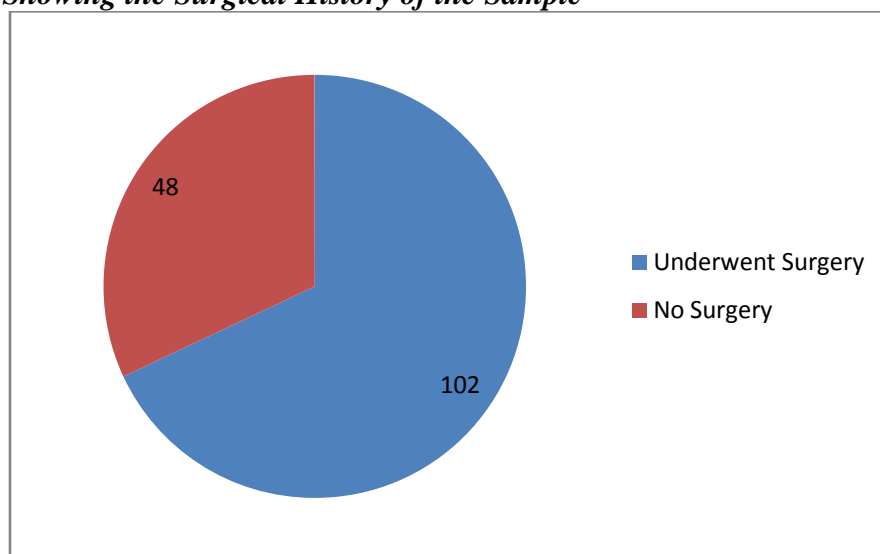


**Figure 3.6 Showing the area of residence of the total Sample**



In the overall sample, around 95 comprising of (63%) resides at urban area, and 55 comprising of (37%) resides at rural area

**Figure 3.7 Showing the Surgical History of the Sample**



In the overall sample, around 102 comprising of (68%) underwent major surgery in their past, and 48 comprising of (32%) had no surgery history in their past.

## **TOOLS ADMINISTERED**

The following tools were used in this study:

### **ASSESSMENT OF PHYSICAL MOBILITY**

Physical Mobility was measured with a self report Elderly Mobility Scale (EMS) Version – 2 developed by Smith (2000). The Elderly Mobility Scale is a 20 point validated assessment tool for the assessment of frail subjects. The Elderly Mobility Scale is measured on Ordinal scale and specially designed for Institutionalized and Hospitalized elderly.

It has a higher Inter-Rate reliability and higher Predictive and Concurrent Validity, and the time taken to administer will be 15 min approximately. The good things about the EMS is functional, clinically significant with minimal training needed and can be used as an assessment tool and an outcome measure.

Elderly Mobility Scale evaluates on individuals mobility problems through seven functional activities including bed mobility, transfers and bodily reaction to perturbation, Speed to sit and stand, Walking speed are analysed. Studies have shown that walking speed diminishes with age and with the average walking speed of healthy women over 75 being 1 metre per second. Increasing age will reduce the walking speed of a person.

Inter rate reliability was established by comparing results of the clinical physiotherapist compared to the researcher. Various grades of clinical staff were used. Results of Mann Whitney Test was 196,  $P = 0.75$ , showing no significance difference between testers.

Concurrent Validity was assessed for the Elderly Mobility Scale by correlating scores with the functional independence measure. EMS scores correlated highly at 0.94 and 0.96 respectively. The EMS was also found to correlate with the modified rivermead mobility index (Spearman's  $\rho = 0.88$ ).

Discrimination validity was assessed by testing 20 healthy communities dwelling volunteers of a similar age group. This group all scored 20/20 demonstrating the scale discriminates between those with mobility deficits and those with none.

### **SCORING**

The scores below 10, indicates the subject are **DEPENDENT** in mobility manoeuvres, require help with basic activities of daily living, such as transfer, toileting and dressing.

The scores 10 – 13, indicates the subjects are **BODERLINE** in terms of safe mobility and independence in activities of daily living, they require some help with some mobility manoeuvres.

The scores above 14, indicates the subjects are able to perform mobility manoeuvres alone and safely and are **INDEPENDENT** in basic activities of daily living.

### **ASSESSMENT OF COGNITIVE DECLINE**

Cognitive decline was measured with a self report Global Deterioration Scale developed by Dr. Barry Reisberg (2005). The Global deterioration Scale is a 07 point validated assessment tool for the assessment of Cognitive decline of the subjects.

The Global deterioration Scale provides the caregivers an overview of the stages of cognitive function for those suffering from a primary degenerative dementia, such as Alzheimer's disease. It is broken down into seven different stages.

- Stages 1 – 3 are the Pre- Dementia stages
- Stages 4 – 7 are the dementia stages

Beginning in stage 5, an individual can no longer survive without assistance, within the Global Deterioration Scale, Each stage is numbered 1-7, given in a short title as

- Stage 1 : No Cognitive decline
- Stage 2 : Very mild cognitive decline
- Stage 3 : Mild cognitive decline
- Stage 4 : Mild Dementia
- Stage 5 : Moderate dementia

- Stage 6 : Moderately severe dementia
- Stage 7 : Severe dementia

Caregivers can get a rough idea of where an individual is at in the disease process by observing that individuals behavioural characteristics and comparing them to the Global Deterioration Scale.

The Global Deterioration Scale demonstrated consistent and acceptable results in terms of test –re-test reliability. Results are typically in the range of 0.82 to 0.94.

### **ASSESSMENT OF DEPRESSION**

Depression was measured with a self report Geriatric Depression Scale developed by Sherry. A. Greenberg (2005). The Geriatric Depression Scale is a 15 point validated assessment tool for the assessment of Depression of the subjects.

While there are many instruments available to measure depression, The Geriatric Depression Scale, first created by Yesavage et al., has been tested and used extensively with the older population. The Geriatric Depression Scale long form is a brief, 30 item questionnaires in which participants are asked to respond by answering Yes or No in reference to how they felt over the past week. A short form of Geriatric Depression Scale consisting of 15 statements was developed in 1986. Questions from the long form GDS, which had the highest correlation with depressive symptoms in validation studies were selected for the short version.

Of the 15 items, 10 indicated the presence of depression when answered positively, while the rest (Item numbers 1, 5, 7, 11, 13) indicated depression when answered negatively.

### **SCORING**

Scores from 0 – 4 are considered normal depending on age, education and complaints, scores ranges from 5 – 8 indicates Mild depression, Scores 9-11 indicates Moderate depression and scores 12-15 indicates the Severe depression.

The short form is more easily used by physically ill, and mildly to moderately dementia patients, who have short attention spans and or feel easily fatigued. It takes about 5 to 7 minutes to complete the test.

### **TARGET POPULATION**

The Geriatric Depression Scale may be used with healthy, medically ill and mild to moderately cognitively impaired older adults. It has been extensively used in community, and institutionalized setting.

### **VALIDITY AND RELIABILITY**

The Geriatric Depression Scale was found to have 92% sensitivity and a 89% specificity, when evaluated against diagnostic criteria. The validity and reliability of the tool have been supported through both clinical practice and research. In a validation study comparing the long and short forms of the geriatric depression scale for self rating of symptoms of depression, both were successful in differentiating depressed from a non depressed adults with a high correlation ( $r = 0.84$ ,  $p < .001$ ).

### **INFORMED CONSENT**

All participants, regardless of the degree of their contribution, age or status were fully informed of the purpose and procedure of this research, including the expected duration of interview. No form of deception or Coercion was employed in order to gain the co-operation of participants. A well informed oral and written consent was employed and all participants in this study had a clear picture of the subject purpose, before taking part in the research.

### **CONFIDENTIALITY**

During the data collection, participants were under no obligation to continue if they felt the urge to withdraw the participation. The information provided by participants was treated in strict confidentiality and the findings were only used for research purpose. In addition, anonymity was granted to all participants.

### **DATA COLLECTION PROCEDURE**

Measurement tool were given to the respondents with required instruction and informed consent. Confidentiality was assured to the respondents. Respondents were allowed to take sufficient time to respond to all the items in the measuring tools.

### **DATA ANALYSIS AND STATISTICAL TOOLS**

SPSS version 21.0 was used to conduct all statistical analyses. ANOVA and correlation studies were used as statistical tools in this study.

In the next chapter results of the statistical study is discussed with tabulation under suitable headings.

## RESULTS AND DISCUSSION

In this study an attempt was made to study the impact of physical mobility on cognitive decline and depression among institutionalised elderly. The significance influences of age, gender, educational qualification, marital status were also analysed. The objectives of the study was to find out the significant relation among physical mobility, cognitive decline and depression of the institutionalised elderly, to explore the effect of physical mobility, cognitive decline and the depression on institutionalised elderly, to study the gender differences among sample in the present study, to examine the influence of demographic variables on physical mobility, cognitive decline and depression of the sample.

This section mainly presents the results from the analyses of the study, focusing on the research objectives. The study was conducted with 150 institutionalised elderly. The quantitative data were analyzed by using SPSS 21.0. Hypothesis of this study is framed based on objectives of the research. Each of the study's hypotheses and presentation of descriptive statistics will be followed by the statistical analysis conducted for testing the hypotheses. The results are presented in the form of tabulations with relevant hypotheses framed.

**Table 4.1 Regression of Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Male (n = 99).**

	<i>B</i>	<i>Beta</i>	<i>t</i>
Cognitive Decline	.002	.001	.011*
Geriatric depression	-.055	-.055	-.538**
Constant	12.352	-	
<i>F</i>		.147	
<i>R</i> <sup>2</sup>		.003	

\* $p < .05$

\*\* $p > .05$

Multiple regression analysis was conducted to examine the relationship among institutionalized elderly male's mobility, cognitive decline, and geriatric depression.

Table 4.1 summarizes the descriptive statistics and analysis results. Regression analysis examining the relationship among elderly mobility, cognitive decline, and geriatric depression of institutionalized elderly male revealed that their depression was negatively related to their mobility ( $Beta = -.055, p > .05$ ). Imran et. al (2009) contends that the elderly patients with any illness that limits the patient's activity or mobility have more risk of developing depression. Significant relationships were found between cognitive decline and mobility of the institutionalized elderly male ( $Beta = .001, p < .05$ ). This is contrary to the existing literature, which asserts that greater, the mobility, lesser the cognitive decline. In the present study, it is found that when institutionalized elderly male have greater mobility, their cognitive decline is high.

**Table 4.2 Regression of Elderly mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female (n = 51).**

	<i>B</i>	<i>Beta</i>	<i>t</i>
Cognitive Decline	-.073	-.038	-.265*
Geriatric Depression	.022	.020	.141*
Constant	12.384	-	
<i>F</i>		.045	
<i>R</i> <sup>2</sup>		.002	

\* $p > .05$

Multiple regression analysis was conducted to examine the relationship among institutionalized elderly female's mobility, cognitive decline, and geriatric depression.

Table 4.2 summarizes the descriptive statistics and analysis results. Regression analysis examining the relationship among elderly mobility, cognitive decline, and geriatric depression of institutionalized elderly female revealed that their cognitive decline is negatively related to their mobility ( $Beta = -.038, p > .05$ ). Tinetti (1986) notes that locomotor, sensory and cognitive functioning are each intimately related to mobility. Difficulties in walking seem to relate to cognitive impairment. Visser (1983) states that demented elderly patients to have a significantly shorter step length, step frequency, step-to-step variability and lower gait speed. Friedman et al. (1988) found that a geriatric rehabilitation program led to greater gains in the walking speed in subjects with normal cognition than in those with impaired cognition. Significant relationships were found between depression and mobility of institutionalized elderly female ( $Beta = .020, p > .05$ ), which again is contrary to the existing empirical knowledge, which states that higher the mobility, lesser the depression. In the present study, it is found that when institutionalized elderly female have greater mobility, their depression is high.

***H01 Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Male will not be correlated with each other.***

***Table 4.3 Relationship among Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Male.***

Variable		Elderly Mobility	Cognitive Decline	Geriatric Depression
Elderly Mobility	<i>r</i> <i>Sig.</i> <i>N</i>	1 - 99		
Cognitive Decline	<i>R</i> <i>Sig.</i> <i>N</i>	.007 .942 99	1 - 99	
Geriatric Depression	<i>r</i> <i>Sig.</i> <i>N</i>	-.055 .587 99	-.113 .265 99	1 - 99

\* $p > .05$

From the above table, it is found that there was no significant correlation between elderly mobility and cognitive decline of institutionalized elderly male ( $r = .007, N = 99, p = .942$ , two tailed). Institutionalized elderly male's elderly mobility and geriatric depression were also not significantly correlated ( $r = -.055, N = 99, p = .587$ , two tailed). Also, there was no significant correlation between cognitive decline of institutionalized elderly male and their depression ( $r = -.113, N = 98, p = .265$ , two tailed). Therefore, the hypothesis stating that the elderly mobility, cognitive decline and geriatric depression of institutionalized elderly male will not be correlated with each other was retained.

***H02 Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Female will not be correlated with each other.***

***Table 4.4 Relationship among Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Female.***

Variable		Elderly Mobility	Cognitive Decline	Geriatric Depression
Elderly Mobility	<i>r</i> <i>Sig.</i> <i>N</i>	1 - 51		
Cognitive Decline	<i>r</i> <i>Sig.</i> <i>N</i>	-.038 .791 51	1 - 51	
Geriatric Depression	<i>r</i> <i>Sig.</i> <i>N</i>	.020 .889 51	.008 .956 51	1 - 51

$p > .05^*$

It is found from the above table that there was no significant correlation between elderly mobility and cognitive decline of institutionalized elderly female ( $r = .038$ ,  $N = 51$ ,  $p = .791$ , two tailed). Institutionalized elderly female's elderly mobility and geriatric depression were also not significantly correlated ( $r = -.020$ ,  $N = 51$ ,  $p = .889$ , two tailed). Also, there was no significant correlation between cognitive decline of institutionalized elderly female and their depression ( $r = .008$ ,  $N = 51$ ,  $p = .956$ , two tailed). Therefore, the hypothesis stating that the elderly mobility, cognitive decline and geriatric depression of institutionalized elderly female will not be correlated with each other was retained.

### ***H03 Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their gender.***

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

***Table 4.5 The influence of Institutionalized Elderly people's Gender on their Mobility, Cognitive Decline and Depression.***

Gender		<i>N</i>	<i>M</i>	<i>SD</i>
Elderly Mobility	Men	99	11.79	3.06
	Women	51	12.39	3.17
Cognitive Decline	Men	99	3.82	1.61
	Women	51	3.54	1.65
Geriatric Depression	Men	99	10.28	3.09
	Women	51	12.03	2.89

In order to find out the significant differences among the institutionalized elderly people in their mobility based on their gender, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.6 Analysis of Variance of the influence of institutionalized elderly people's Gender on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	11.884	11.884	1.233	.269*
	Within groups	148	1426.116	9.636		
	Total	149	1438.000			

\*  $p > .05$

It was found that there was no significant effect of the gender of the respondents on their mobility level ( $F(1, 148) = 1.233, p > .05$ , Wilks' Lambda = .992, partial eta squared = .008).

In order to find out the significant differences among the institutionalized elderly people in their cognitive decline based on their gender, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.7 Analysis of Variance of the influence of institutionalized elderly people's Gender on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	2.625	2.625	.994	.320*
	Within groups	148	390.708	2.640		
	Total	149	393.333			

\*  $p > .05$

It was found that there was no significant effect of the gender of the respondents on their cognitive decline ( $F(1, 148) = .994, p > .05$ , Wilks' Lambda = .993, partial eta squared = .007).

In order to find out the significant differences among the institutionalized elderly people in their depression based on their gender, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.8 Analysis of Variance of the influence of institutionalized elderly people's Gender on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	103.84	103.84	11.33	.001*
	Within groups	148	1356.00	9.162		
	Total	149	1459.84			

\*  $p < .05$

It was found that there was a significant effect of the gender of the respondents on their depression level ( $F(1, 148) = 11.33, p < .05$ , Wilks' Lambda = .929, partial eta squared = .071). Institutionalized elderly female have high depression score ( $M = 12.03, SD = 2.90, N = 51$ ) when compared to male, who have comparatively low depression score of  $M = 10.28, SD = 3.09, N = 99$ ).



***H04 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their age.***

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

***Table 4.9 The influence of Institutionalized Elderly Male's Age on their Mobility, Cognitive Decline and Depression.***

Variable	Age	N	M	SD
Elderly Mobility	65 – 70	20	12.30	1.72
	70 – 80	60	11.73	2.95
	80 & above	19	11.47	4.39
Cognitive Decline	65 - 70	20	4.25	1.92
	70 – 80	60	3.67	1.51
	80&above	19	3.89	1.56
Geriatric Depression	65 - 70	20	10.80	3.36
	70 - 80	60	10.36	3.02
	80&above	19	9.47	3.03

In order to find out the significant differences among the institutionalized elderly male in their mobility based on their age, analysis of variance statistics was worked out and the results are presented in the following table.

***Table 4.10 Analysis of Variance of the influence of institutionalized elderly Male's Age on their Mobility.***

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	2	7.289	3.645	.383	.683*
	Within groups	96	914.670	9.528		
	Total	98	921.960			

\* $p > .05$

It was found that there was no significant difference of the respondents' age on their mobility level ( $F(2, 96) = .383, p > .05$ , Wilks' Lambda = .992, partial eta squared = .008).

In order to find out the significant differences among the institutionalized elderly male in their cognitive decline based on their age, analysis of variance statistics was worked out and the results are presented in the following table.

***Table 4.11 Analysis of Variance of the influence of institutionalized elderly Male's Age on their Cognitive Decline.***

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	2	5.208	2.60	1.004	.370*
	Within groups	96	248.87	2.59		
	Total	98	254.08			

\* $p > .05$

It was found that there was no significant effect of the respondents' age on their cognitive decline ( $F(2, 96) = 1.004, p > .05$ , Wilks' Lambda = .980, partial eta squared = .020).

In order to find out the significant differences among the institutionalized elderly male in their depression based on their age, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.12 Analysis of Variance of the influence of Institutionalized Elderly Male's Age on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	2	18.211	9.105	.952	.389*
	Within groups	96	917.870	9.561		
	Total	98	936.081			

\* $p > .05$

It was found that there was no significant difference of the respondents' age on their depression ( $F(2, 96) = .952, p > .05$ , Wilks' Lambda = .981, partial eta squared = .019).

**H05 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Marital Status.**

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table.

**Table 4.13 The influence of Institutionalized Elderly Male's Marital Status on their Mobility, Cognitive Decline and Depression.**

Variable	Marital Status	N	M	SD
Elderly mobility	Single	22	13.18	2.08
	Married	77	11.40	3.20
	Total	99	11.80	3.06
Cognitive decline	Single	22	4.77	1.69
	Married	77	3.55	1.49
	Total	99	3.83	1.61
Geriatric depression	Single	22	10.22	2.71
	Married	77	10.30	3.21
	Total	99	10.28	3.09

In order to find out the significant differences among the institutionalized elderly male in their mobility based on their marital status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.14 Analysis of Variance of the influence of Institutionalized Elderly Male's Marital Status on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	54.17	54.17	6.05	.016*
	Within groups	97	867.80	8.94		
	Total	98	921.96			

\* $p < .05$

It was found that there was a significant effect of the respondents' marital status on their mobility ( $F(1, 97) = 6.05, p < .05$ , Wilks' Lambda = .941, partial eta squared = .059). Institutionalized elderly male who are single and divorced have high level of mobility ( $M = 13.18, SD = 2.08, N = 22$ ) than the married elderly male who are comparatively less mobile ( $M = 10.28, SD = 3.20, N = 77$ ).

In order to find out the significant differences among the institutionalized elderly male in their cognitive decline based on their marital status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.15 Analysis of Variance of the influence of Institutionalized Elderly Male's Marital Status on their cognitive decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	25.23	25.23	10.69	.001*
	Within groups	97	228.85	2.36		
	Total	98	254.08			

\* $p < .05$

It was found that there was a significant effect of the respondents' marital status on their cognitive decline ( $F(1, 97) = 10.69, p < .05$ , Wilks' Lambda = .901, partial eta squared = .099). Single and divorced institutionalized elderly male have high decline in their cognitive function ( $M = 4.77, SD = 1.69, N = 22$ ) when compared to married whose cognitive decline is the least ( $M = 3.56, SD = 1.49, N = 77$ ).

In order to find out the significant differences among the institutionalized elderly male in their depression based on their marital status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.16 Analysis of Variance of the influence of Institutionalized Elderly Male's Marital Status on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	.087	.087	.009	.924*
	Within groups	97	935.99	9.65		
	Total	98	936.08			

\* $p > .05$

It was found that there was no significant difference in depression of the respondents with regard to their marital status ( $F(1, 97) = .009, p > .05$ , Wilks' Lambda = 1, partial eta squared = .000).

**H06 Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Spouse Status.**

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.17 The influence of Institutionalized Elderly Male's Spouse Status on their Mobility, Cognitive Decline and Depression.**

Variable	Spouse Status	N	M	SD
Elderly mobility	Passed away	46	12.39	2.43
	Alive	53	11.28	3.47
	Total	99	11.80	3.07
Cognitive decline	Passed away	46	3.93	1.53
	Alive	53	3.74	1.69
	Total	99	3.82	1.61
Geriatric depression	Passed away	46	10.78	2.75
	Alive	53	9.85	3.32
	Total	99	10.28	3.09

In order to find out the significant differences among the institutionalized elderly male in their mobility based on their spouse status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.18 Analysis of Variance of the influence of Institutionalized Elderly Male's Spouse Status on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	30.25	30.25	3.29	.07*
	Within groups	97	891.71	9.19		
	Total	98	921.96			

\* $p < .05$

It was found that there was a marginally significant effect of the respondents' spouse status on their mobility ( $F(1, 97) = 3.29, p < .05$ , Wilks' Lambda = .967, partial eta squared = .033). Institutionalized elderly male whose spouse has passed away are highly mobile ( $M = 12.39, SD = 2.43, N = 46$ ) whereas elderly male whose spouse are alive are comparatively less mobile ( $M = 11.28, SD = 3.47, N = 53$ ).

In order to find out the significant differences among the institutionalized elderly people in their cognitive decline based on their spouse status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.19 Analysis of Variance of the influence of Institutionalized Elderly Male's Spouse Status on their cognitive decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	.97	.97	.37	.543*
	Within groups	97	253.10	2.60		
	Total	98	254.08			

\* $p > .05$

It was found that there was no significant effect of the respondents' spouse status on their cognitive decline ( $F(1, 97) = .37, p > .05$ , Wilks' Lambda = .996, partial eta squared = .004).

In order to find out the significant differences among the institutionalized elderly people in their depression based on their spouse status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.20 Analysis of Variance of the influence of Institutionalized Elderly Male's Spouse Status on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	21.46	21.46	2.28	.135*
	Within groups	97	914.62	9.43		
	Total	98	936.08			

\* $p > .05$

It was found that there was no significant difference in the depression of the respondents with regard to their spouse status ( $F(1, 97) = 2.28$ ,  $p > .05$ , Wilks' Lambda = .977, partial eta squared = .023).

**H07 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Children.**

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.21 The influence of Institutionalized Elderly Male's Children on their Mobility, Cognitive Decline and Depression.**

Variable	No of Children	N	M	SD
Elderly mobility	One & no child	56	11.91	2.91
	two & more	43	11.65	3.28
	Total	99	11.80	3.07
Cognitive decline	One & no child	56	3.57	1.67
	Two & more	43	4.16	1.48
	Total	99	3.83	1.61
Geriatric depression	One & no child	56	10.29	3.07
	Two & more	43	10.27	3.14
	Total	99	10.28	3.09

In order to find out the significant differences among the institutionalized elderly male in their mobility based on their children, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.22 Analysis of Variance of the influence of Institutionalized Elderly Male's Children on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	1.64	1.64	.173	.679*
	Within groups	97	920.32	9.49		
	Total	98	921.96			

\* $p > .05$

It was found that there was no significant effect of the respondents' children on their mobility ( $F(1, 97) = .173, p > .05$ , Wilks' Lambda = .998, partial eta squared = .002).

In order to find out the significant differences among the institutionalized elderly male in their cognitive decline based on their children, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.23 Analysis of Variance of the influence of Institutionalized Elderly Male's Children on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	8.51	8.51	3.36	.070*
	Within groups	97	245.58	2.53		
	Total	98	254.08			

\* $p > .05$

It was found that there was marginally significant effect of the respondents' children on their cognitive decline ( $F(1, 97) = 3.36, p > .05$ , Wilks' Lambda = .967, partial eta squared = .033). Institutionalized elderly male who have two and more children have high cognitive decline ( $M = 4.16, SD = 1.48, N = 43$ ) and those who have one or no child have the least cognitive decline with  $M = 3.57, SD = 1.67, N = 56$ .

In order to find out the significant differences among the institutionalized elderly male in their depression based on their spouse status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.24 Analysis of Variance of the influence of Institutionalized Elderly Male's Children on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	.001	.001	.00	.992*
	Within groups	97	936.08	9.65		
	Total	98	936.08			

\* $p > .05$

It was found that there was no significant effect on the respondents' depression with regard to their children ( $F(1, 97) = 0, p > .05$ , Wilks' Lambda = 1, partial eta squared = 0).

#### ***H08 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Education Level.***

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.25 The influence of Institutionalized Elderly Male's Education Level on their Mobility, Cognitive Decline and Depression.**

Variable	Education Level	N	M	SD
Elderly mobility	School	95	11.79	3.12
	College	4	12.00	1.41
	Total	99	11.80	3.07
Cognitive decline	School	95	3.79	1.64
	College	4	4.75	.500
	Total	99	3.83	1.61
Geriatric depression	School	95	10.33	3.07
	College	4	9.00	3.82
	Total	99	10.28	3.09

In order to find out the significant differences among the institutionalized elderly people in their mobility based on their education, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.26 Analysis of Variance of the influence of Institutionalized Elderly Male's Education on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	.170	.170	.018	.894*
	Within groups	97	921.79	9.50		
	Total	98	921.96			

\* $p > .05$

It was found that there was no significant effect of the respondents' education on their mobility ( $F(1, 97) = .018, p > .05$ , Wilks' Lambda = 1, partial eta squared = 0).

In order to find out the significant differences among the institutionalized elderly male in their cognitive decline based on their education, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.27 Analysis of Variance of the influence of Institutionalized Elderly Male's Education on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	3.54	3.54	1.37	.244*
	Within groups	97	250.53	2.58		
	Total	98	254.08			

\* $p > .05$

It was found that there was no significant effect of the respondents' education on their cognitive decline ( $F(1, 97) = 1.37, p > .05$ , Wilks' Lambda = 0.986, partial eta squared = .014).

In order to find out the significant differences among the institutionalized elderly male in their depression based on their education level, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.28 Analysis of Variance of the influence of Institutionalized Elderly Male's Education on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	6.860	6.860	.716	.400*
	Within groups	97	929.22	9.58		
	Total	98	936.08			

\* $p > .05$

It was found that there was no significant effect on the respondents' depression with regard to their education level ( $F(1, 97) = .716, p > .05$ , Wilks' Lambda = 0.993, partial eta squared = .007).

**H09 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Siblings.**

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.29 The influence of Institutionalized Elderly Male's Siblings on their Mobility, Cognitive Decline and Depression.**

Variable	No of Siblings	N	M	SD
Elderly mobility	Below two	76	12.09	2.26
	more than one	23	10.83	4.79
	Total	99	11.80	3.07
Cognitive decline	Below two	76	3.76	1.57
	more than one	23	4.04	1.74
	Total	99	3.83	1.61
Geriatric depression	Below two	76	10.40	3.11
	more than one	23	9.87	3.03
	Total	99	10.28	3.09

In order to find out the significant differences among the institutionalized elderly male in their mobility based on their siblings, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.30 Analysis of Variance of the influence of Institutionalized Elderly Male's Siblings on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	28.30	28.30	3.07	.083*
	Within groups	97	893.66	9.21		
	Total	98	921.96			

\* $p > .05$



It was found that there was marginally significant effect of the respondents' siblings on their mobility ( $F(1, 97) = 3.07, p > .05$ , Wilks' Lambda = 0.969, partial eta squared = .031). Elderly institutionalized male who have below two siblings are highly mobile ( $M = 12.09, SD = 2.26, N = 76$ ) when compared to those who have more than one sibling with  $M = 10.83, SD = 4.79, N = 23$ .

In order to find out the significant differences among the institutionalized elderly male in their cognitive decline based on their siblings, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.31 Analysis of Variance of the influence of Institutionalized Elderly Male's Siblings on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	1.39	1.39	.533	.467*
	Within groups	97	252.69	2.60		
	Total	98	254.08			

\* $p > .05$

It was found that there was no significant effect of the respondents' siblings on their cognitive decline ( $F(1, 97) = .533, p > .05$ , Wilks' Lambda = 0.995, partial eta squared = .005).

In order to find out the significant differences among the institutionalized elderly male in their depression based on their siblings, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.32 Analysis of Variance of the influence of Institutionalized Elderly Male's Siblings on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	5.12	5.12	.533	.467*
	Within groups	97	930.97	9.60		
	Total	98	936.08			

\* $p > .05$

It was found that there was no significant effect on the respondents' depression with regard to their siblings ( $F(1, 97) = .533, p > .05$ , Wilks' Lambda = 0.995, partial eta squared = .005).

***H010 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Residence.***

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.33 The influence of Institutionalized Elderly Male's Residence on their Mobility, Cognitive Decline and Depression.**

Variable	Residence	N	M	SD
Elderly mobility	Rural	33	10.70	3.48
	Urban	66	12.34	2.70
	Total	99	11.80	3.07
Cognitive decline	Rural	33	3.60	1.06
	Urban	66	3.94	1.82
	Total	99	3.83	1.61
Geriatric depression	Rural	33	10.54	3.43
	Urban	66	10.15	2.92
	Total	99	10.28	3.09

In order to find out the significant differences among the institutionalized elderly male in their mobility based on their residence, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.34 Analysis of Variance of the influence of Institutionalized Elderly Male's Residence on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	60.00	60.00	6.75	.011*
	Within groups	97	861.95	8.89		
	Total	98	921.96			

\* $p < .05$

It was found that there was a significant effect of the respondents' residence on their mobility ( $F(1, 97) = 6.75, p < .05$ , Wilks' Lambda = 0.935, partial eta squared = .065). Institutionalized elderly male living in the urban areas are highly mobile ( $M = 12.34, SD = 2.70, N = 66$ ) when compared to male who are living in the rural areas with  $M = 10.69, SD = 3.48, N = 33$ ).

In order to find out the significant differences among the institutionalized elderly people in their cognitive decline based on their residence, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.35 Analysis of Variance of the influence of Institutionalized Elderly Male's Residence on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	2.44	2.44	.942	.334*
	Within groups	97	251.64	2.59		
	Total	98	254.08			

\* $p > .05$

It was found that there was no significant effect of the respondents' residence on their cognitive decline ( $F(1, 97) = .533, p > .05$ , Wilks' Lambda = 0.990, partial eta squared = .010).

In order to find out the significant differences among the institutionalized elderly people in their depression based on their residence, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.36 Analysis of Variance of the influence of Institutionalized Elderly Male's Residence on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	3.41	3.41	.355	.553*
	Within groups	97	932.66	9.62		
	Total	98	936.08			

\* $p > .05$

It was found that there was no significant effect on the respondents' depression with regard to their residence ( $F(1, 97) = .355, p > .05$ , Wilks' Lambda = 0.996, partial eta squared = .004).

**Ha11: The physical problems of male institutionalised elderly will affect their mobility.**

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

**Table 4.37 The relationship among physical problems of Male Institutionalised Elderly and their mobility,**

Variable	Name of the Disorder	Mobility		Total
		Dependent	Independent	
Physical Problems	Arthritis	10	00	10
	Asthma	15	05	20
	Heart Problems	13	03	16
	Cancer	04	06	10
	Renal Disorders	05	03	08
	Sleeplessness	07	02	09
	More than one problem	20	06	26
Total		74	25	99

Chi – Square Test =

<i>N</i>	<i>df</i>	Chi-Sq	<i>P</i> -Value
99	6	10.88	.09

A Chi – Square test of independence was performed to examine the relation between physical problems of the male elderly respondents and their mobility. The relation between these variables was found to be marginally significant,  $\chi^2 (6, N = 99), P < .10$ . It is found that the male institutionalised elderly with Arthritis, Asthma, Heart problems and more than one physical problems show low mobility compared to other physical disorders. Therefore, the hypothesis *Ha1* which states that the physical problems of male institutionalised elderly will affect their mobility is accepted and concluded that Arthritis, Asthma, Heart problems and more than physical problems affect the mobility of male institutionalised elderly.

***Ha12: The physical problems of male institutionalised elderly will affect their Cognitive decline.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

***Table 4.38 The relationship among physical problems of Male Institutionalised Elderly and their Cognitive decline,***

Variable	Name of the Disorder	Cognitive decline		Total
		Low	High	
Physical Problems	Arthritis	04	06	10
	Asthma	11	09	20
	Heart Problems	04	12	16
	Cancer	0	10	10
	Renal Disorders	05	03	08
	Sleeplessness	04	05	09
	More than one problem	09	17	26
Total		37	62	99

$N$        $df$       Chi-Sq       $P$ -Value  
 Chi – Square Test = -----  
                  99      6      10.88      .05

A Chi – Square test of independence was performed to examine the relation between physical problems of the male institutionalised elderly respondents and their cognitive decline. The relation between these variables was found to be highly significant,  $\chi^2 (6, N = 99), P < .05$ . It is found that the male institutionalised elderly with Heart problems, Cancer and more than one physical problems shows cognitive decline compared to other physical disorders. Therefore, the hypothesis *Ha2* which states that the physical problems of male institutionalised elderly will affect their cognitive decline is accepted and concluded that

Heart problems, Cancer and more than one physical problem affect the cognitive decline of male institutionalised elderly.

***Ha13: The physical problems of male institutionalised elderly will affect their depression.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

**Table 4.39** *The relationship among physical problems of Male Institutionalised Elderly and their depression,*

Variable	Name of the Disorder	Geriatric Depression		Total
		Low	High	
Physical Problems	Arthritis	03	07	10
	Asthma	07	13	20
	Heart Problems	09	07	16
	Cancer	05	05	10
	Renal Disorders	02	06	08
	Sleeplessness	04	05	09
	More than on problem	10	16	26
Total		40	59	99

$$\begin{array}{ccccc} & N & df & \text{Chi-Sq} & P\text{-Value} \\ \text{Chi - Square Test} = & \text{-----} & & & \\ & 99 & 6 & 3.6 & .72 \end{array}$$

A Chi – Square test of independence was performed to examine the relation between physical problems of the male institutionalised elderly respondents and their depression. The relation between these variables was found to be Insignificant,  $\chi^2 (6, N = 99), P > .72$ . It is found that the male institutionalised elderly with physical problems does not have a significant relationship with depression. Therefore, the hypothesis *Ha3* which states that the physical problems of male institutionalised elderly will affect their depression is rejected and concluded that physical problem does not have relationship with depression of male institutionalised elderly.

***Ha14: The Psychological problems of male institutionalised elderly will affect their Mobility.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

**Table 4.40 The relationship among Psychological problems of Male Institutionalised Elderly and their Mobility,**

Variable	Name of the Disorder	Mobility		Total
		Dependent	Independent	
Psychological Problems	Death Anxiety	34	14	48
	Worthlessness & Lonely	10	03	13
	More than one problems	30	08	38
Total		74	25	99

$$\text{Chi - Square Test} = \frac{N}{df} \text{ Chi-Sq } P\text{-Value}$$

$$99 \quad 2 \quad .77 \quad .67$$

A Chi – Square test of independence was performed to examine the relation between Psychological problems of the male institutionalised elderly respondents and their Mobility. The relation between these variables was found to be Insignificant,  $\chi^2 (2, N = 99), P > .67$ . It is found that the psychological problems of male institutionalised elderly do not have a significant relationship with mobility. Therefore, the hypothesis *Ha4* which states that the Psychological problems of male institutionalised elderly will affect their mobility is rejected and concluded that Psychological problems do not influence the mobility of male institutionalised elderly.

***Ha15: The Psychological problems of male institutionalised elderly will affect their Cognitive decline.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS - 21.0 and the results are presented in the following table.

**Table 4.41 The relationship among Psychological problems of Male Institutionalised Elderly and their Cognitive decline.**

Variable	Name of the Disorder	Cognitive Decline		Total
		Low	High	
Psychological Problems	Death Anxiety	17	31	48
	Worthlessness & Lonely	06	07	13
	More than one problems	14	24	38
Total		37	62	99

	<i>N</i>	<i>df</i>	Chi-Sq	<i>P</i> -Value
Chi – Square Test = -----				
	99	2	.51	.77

A Chi – Square test of independence was performed to examine the relation between Psychological problems of the male institutionalised elderly respondents and their cognitive decline. The relation between these variables was found to be Insignificant,  $\chi^2$  (2,  $N = 99$ ),  $P > .77$ . It is found that the psychological problems of male institutionalised elderly do not have a significant relationship with cognitive decline. Therefore, the hypothesis *Ha5* which states that the Psychological problems of male institutionalised elderly will affect their cognitive decline is rejected and concluded that Psychological problems do not influence the cognitive decline of male institutionalised elderly.

***Ha16: The Psychological problems of male institutionalised elderly will affect their Depression.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS- 21.0 and the results are presented in the following table.

***Table 4.42 The relationship among Psychological problems of Male Institutionalised Elderly and their depression.***

Variable	Name of the Disorder	Geriatric Depression		Total
		Low	High	
Psychological Problems	Death Anxiety	22	26	48
	Worthlessness & Lonely	06	07	13
	More than one problems	12	26	38
Total		40	59	99

	<i>N</i>	<i>df</i>	Chi-Sq	<i>P</i> -Value
Chi – Square Test = -----				
	99	2	1.9	.36

A Chi – Square test of independence was performed to examine the relation between Psychological problems of the male institutionalised elderly respondents and their depression. The relation between these variables was found to be Insignificant,  $\chi^2$  (2,  $N = 99$ ),  $P > .36$ . It is found that the psychological problems of male institutionalised elderly do not have a significant relationship with depression. Therefore, the hypothesis *Ha6* which states that the Psychological problems of male institutionalised elderly will affect their depression is rejected and concluded that Psychological problems do not influence the depression of male institutionalised elderly.

***H017 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Age.***

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

***Table 4.43 The influence of Institutionalized Elderly Female's Age on their Mobility, Cognitive Decline and Depression.***

Variable	Age	N	M	SD
Elderly Mobility	65 – 70	23	12.35	3.64
	70 – 80	11	13.00	2.97
	80&above	17	12.06	2.73
Cognitive Decline	65 - 70	23	3.74	1.57
	70 – 80	11	3.27	1.90
	80&above	17	3.47	1.66
Geriatric Depression	65 - 70	23	11.13	3.08
	70 - 80	11	13.73	2.61
	80&above	17	12.18	2.40

In order to find out the significant differences among the institutionalized elderly female in their mobility based on their age, analysis of variance statistics was worked out and the results are presented in the following table.

***Table 4.44 Analysis of Variance of the influence of Institutionalized Elderly Female's Age on their Mobility.***

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	2	5.60	2.99	.289	.750*
	Within groups	48	498.16	10.38		
	Total	50	504.16			

\* $p > .05$

It was found that there was no significant difference of the respondents' age on their mobility level ( $F(2, 48) = .289, p > .05$ , Wilks' Lambda = .988, partial eta squared = .012). In order to find out the significant differences among the institutionalized elderly female in their cognitive decline based on their age, analysis of variance statistics was worked out and the results are presented in the following table.

***Table 4.45 Analysis of Variance of the influence of Institutionalized Elderly Female's Age on their Cognitive Decline.***

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	2	1.78	.888	.316	.731*
	Within groups	48	134.85	2.81		
	Total	50	136.63			

\* $p > .05$



It was found that there was no significant effect of the respondents' age on their cognitive decline ( $F(2, 48) = .731, p > .05$ , Wilks' Lambda = .987, partial eta squared = .013).

In order to find out the significant differences among the institutionalized elderly female in their depression based on their age, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.46 Analysis of Variance of the influence of Institutionalized Elderly Female's Age on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	2	50.66	25.33	3.29	.046*
	Within groups	48	369.261	7.69		
	Total	50	419.92			

\* $p < .05$

It was found that there was a significant difference of the respondents' age on their depression ( $F(2, 48) = 3.29, p < .05$ , Wilks' Lambda = .879, partial eta squared = .121). Institutionalized elderly female within the age group of 70 to 80 years have high depression score ( $M = 13.72, SD = 2.61, N = 11$ ) than the other age groups and those female who belong to the age group of 65 to 70 years have the least depression score with  $M = 11.13, SD = 3.07, N = 23$ . Elderly female belonging to the age group of 80 and above have moderate depression with  $M = 12.17, SD = 2.40, N = 17$ .

***H018 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Marital Status.***

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.47 The influence of Institutionalized Elderly Female's Marital Status on their Mobility, Cognitive Decline and Depression.**

Variable	Marital Status	N	M	SD
Elderly mobility	Single	8	11.75	2.43
	Married	43	12.51	3.05
	Total	51	12.39	3.18
Cognitive decline	Single	8	3.25	1.49
	Married	43	3.60	1.69
	Total	51	3.55	1.65
Geriatric depression	Single	8	10.88	1.46
	Married	43	12.26	3.06
	Total	51	12.04	2.90

In order to find out the significant differences among the institutionalized elderly female in their mobility based on their marital status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.48 Analysis of Variance of the influence of Institutionalized Elderly Female's Marital Status on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	3.91	3.91	.383	.539*
	Within groups	49	500.24	10.21		
	Total	50	504.16			

\* $p > .05$

It was found that there was no significant effect of the respondents' marital status on their mobility ( $F(1, 49) = .383, p > .05$ , Wilks' Lambda = .992, partial eta squared = .008).

In order to find out the significant differences among the institutionalized elderly female in their cognitive decline based on their marital status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.49 Analysis of Variance of the influence of Institutionalized Elderly Female's Marital Status on their cognitive decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	.848	.848	.306	.583*
	Within groups	49	135.80	2.77		
	Total	50	136.63			

\* $p > .05$

It was found that there was no significant effect of the respondents' marital status on their cognitive decline ( $F(1, 49) = .306, p > .05$ , Wilks' Lambda = .994, partial eta squared = .006).

In order to find out the significant differences among the institutionalized elderly female in their depression based on their marital status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.50 Analysis of Variance of the influence of Institutionalized Elderly Female's Marital Status on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	12.86	12.86	1.55	.219*
	Within groups	49	407.06	8.31		
	Total	50	419.92			

\* $p > .05$

It was found that there was no significant difference in depression of the respondents with regard to their marital status ( $F(1, 49) = 1.55, p > .05$ , Wilks' Lambda = .969, partial eta squared = .031).

**H019 Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Spouse Status.**

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.51 The influence of Institutionalized Elderly Female's Spouse Status on their Mobility, Cognitive Decline and Depression.**

Variable	Spouse Status	N	M	SD
Elderly mobility	Passed away	16	12.94	4.23
	Alive	35	12.14	2.59
	Total	51	12.39	3.18
Cognitive decline	Passed away	16	3.50	1.82
	Alive	35	3.57	1.60
	Total	51	3.54	1.65
Geriatric depression	Passed away	16	11.81	2.97
	Alive	35	12.14	2.90
	Total	51	12.03	2.90

In order to find out the significant differences among the institutionalized elderly female in their mobility based on their spouse status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.52 Analysis of Variance of the influence of Institutionalized Elderly Female's Spouse Status on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	6.93	6.93	.683	.412*
	Within groups	49	497.22	10.15		
	Total	50	504.15			

\* $p > .05$

It was found that there was no significant effect of the respondents' spouse status on their mobility ( $F(1,49) = .683, p > .05$ , Wilks' Lambda = .986, partial eta squared = .014).

In order to find out the significant differences among the institutionalized elderly female in their cognitive decline based on their spouse status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.53 Analysis of Variance of the influence of Institutionalized Elderly Female's Spouse Status on their cognitive decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	.056	.056	.020	.888 *
	Within groups	49	136.57	2.79		
	Total	50	136.63			

\* $p > .05$

It was found that there was no significant effect of the respondents' spouse status on their cognitive decline ( $F(1, 49) = .020, p > .05$ , Wilks' Lambda = 1, partial eta squared = .000).

In order to find out the significant differences among the institutionalized elderly female in their depression based on their spouse status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.54 Analysis of Variance of the influence of Institutionalized Elderly Female's Spouse Status on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	1.19	1.19	.140	.710*
	Within groups	49	418.72	8.55		
	Total	50	419.92			

\* $p > .05$

It was found that there was no significant difference in the depression of the respondents with regard to their spouse status ( $F(1, 49) = .140, p > .05$ , Wilks' Lambda = .997, partial eta squared = .003).

**H020 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Children.**

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.55 The influence of Institutionalized Elderly Female's Children on their Mobility, Cognitive Decline and Depression.**

Variable	No of Children	N	M	SD
Elderly mobility	One & no child	19	11.05	2.97
	Two & more	32	13.19	3.06
	Total	51	12.39	3.18
Cognitive decline	One & no child	19	3.32	1.70
	Two & more	32	3.69	1.64
	Total	51	3.55	1.65
Geriatric depression	One & no child	19	13.26	2.26
	Two & more	32	11.31	3.02
	Total	51	12.03	2.90

In order to find out the significant differences among the institutionalized elderly female in their mobility based on their children, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.56 Analysis of Variance of the influence of Institutionalized Elderly Female's Children on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	54.33	54.33	5.92	.019*
	Within groups	49	449.82	9.18		
	Total	50	504.16			

\* $p < .05$

It was found that there was a significant effect of the respondents' children on their mobility ( $F(1, 49) = 5.92, p < .05$ , Wilks' Lambda = .892, partial eta squared = .108). Institutionalized elderly female who have two and more than two children have high mobility ( $M = 13.18, SD = 3.06, N = 32$ ) when compared to those female who have one or no child ( $M = 11.05, SD = 2.97, N = 19$ ).

In order to find out the significant differences among the institutionalized elderly female in their cognitive decline based on their children, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.57 Analysis of Variance of the influence of Institutionalized Elderly Female's Children on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	1.65	1.65	.598	.443*
	Within groups	49	134.98	2.76		
	Total	50	136.63			

\* $p > .05$

It was found that there was no significant effect of the respondents' children on their cognitive decline ( $F(1, 49) = .598, p > .05$ , Wilks' Lambda = .967, partial eta squared = .033).

In order to find out the significant differences among the institutionalized elderly male in their depression based on their spouse status, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.58 Analysis of Variance of the influence of Institutionalized Elderly Female's Children on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	45.36	45.36	5.93	.019*
	Within groups	49	374.56	7.64		
	Total	50	419.92			

\* $p < .05$

It was found that there was a significant effect on the respondents' depression with regard to their children ( $F(1, 49) = 5.93, p < .05$ , Wilks' Lambda = .892, partial eta squared = .108). Depression is high in institutionalized elderly female who have one or no child with  $M = 13.26, SD = 2.25, N = 19$  when compared to those who have two or more than two children ( $M = 11.31, SD = 3.02, N = 32$ ).

#### ***H021 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Education Level.***

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.59 The influence of Institutionalized Elderly Female's Education Level on their Mobility, Cognitive Decline and Depression.**

Variable	Education Level	N	M	SD
Elderly mobility	School	44	12.52	3.29
	College	7	11.57	2.37
	Total	51	12.39	3.18
Cognitive decline	School	44	3.53	1.64
	College	7	3.71	1.89
	Total	51	3.55	1.65
Geriatric depression	School	44	12.09	2.88
	College	7	11.71	3.20
	Total	51	12.03	2.90

In order to find out the significant differences among the institutionalized elderly female in their mobility based on their education, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.60 Analysis of Variance of the influence of Institutionalized Elderly Female's Education on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	5.47	5.47	.537	.467*
	Within groups	49	498.69	10.18		
	Total	50	504.157			

\* $p > .05$

It was found that there was no significant effect of the respondents' education on their mobility ( $F(1, 49) = .537, p > .05$ , Wilks' Lambda = .989, partial eta squared = .011).

In order to find out the significant differences among the institutionalized elderly female in their cognitive decline based on their education, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.61 Analysis of Variance of the influence of Institutionalized Elderly Female's Education on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	.222	.222	.080	.779*
	Within groups	49	136.41	2.78		
	Total	50	136.62			

\* $p > .05$

It was found that there was no significant effect of the respondents' education on their cognitive decline ( $F(1, 49) = .080, p > .05$ , Wilks' Lambda = 0.998, partial eta squared = .002).

In order to find out the significant differences among the institutionalized elderly female in their depression based on their education level, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.62 Analysis of Variance of the influence of Institutionalized Elderly Female's Education on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	.86	.86	.100	.753*
	Within groups	49	419.07	8.55		
	Total	50	419.92			

\* $p > .05$

It was found that there was no significant effect on the respondents' depression with regard to their education level ( $F(1, 49) = .100, p > .05$ , Wilks' Lambda = 0.998, partial eta squared = .002).

**H022 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Siblings.**

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:

**Table 4.63 The influence of Institutionalized Elderly Female's Siblings on their Mobility, Cognitive Decline and Depression.**

Variable	No of Siblings	N	M	SD
Elderly mobility	Below two	36	11.97	3.25
	more than one	15	13.40	2.85
	Total	51	12.39	3.18
Cognitive decline	Below two	36	3.44	1.68
	more than one	15	3.80	1.61
	Total	51	3.55	1.65
Geriatric depression	Below two	36	12.33	2.70
	more than one	15	11.33	3.31
	Total	51	12.04	2.90

In order to find out the significant differences among the institutionalized elderly female in their mobility based on their siblings, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.64 Analysis of Variance of the influence of Institutionalized Elderly Male's Siblings on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	21.59	21.59	2.19	.145*
	Within groups	49	482.57	9.85		
	Total	50	504.16			

\* $p > .05$

It was found that there was no significant effect of the respondents' siblings on their mobility ( $F(1, 49) = 2.19, p > .05$ , Wilks' Lambda = 0.957, partial eta squared = .043).

In order to find out the significant differences among the institutionalized elderly female in their cognitive decline based on their siblings, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.65 Analysis of Variance of the influence of Institutionalized Elderly Female's Siblings on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	1.34	1.34	.485	.490*
	Within groups	49	135.29	2.76		
	Total	50	136.63			

\* $p > .05$

It was found that there was no significant effect of the respondents' siblings on their cognitive decline ( $F(1, 49) = .485, p > .05$ , Wilks' Lambda = 0.990, partial eta squared = .010).

In order to find out the significant differences among the institutionalized elderly female in their depression based on their siblings, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.66 Analysis of Variance of the influence of Institutionalized Elderly Female's Siblings on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	10.59	10.59	1.27	.266*
	Within groups	49	409.33	8.35		
	Total	50	419.92			

\* $p > .05$

It was found that there was no significant effect on the respondents' depression with regard to their siblings ( $F(1, 49) = 1.27, p > .05$ , Wilks' Lambda = 0.975, partial eta squared = .025).

**H023 Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Residence.**

The above null hypothesis was tested by working out ANOVA (Analysis of Variance) and the results are presented in the following table:



**Table 4.67 The influence of Institutionalized Elderly Female's Residence on their Mobility, Cognitive Decline and Depression.**

Variable	Residence	N	M	SD
Elderly mobility	Rural	22	12.23	3.09
	Urban	29	12.52	3.29
	Total	51	12.39	3.18
Cognitive decline	Rural	22	3.86	1.55
	Urban	29	3.31	1.71
	Total	51	3.55	1.65
Geriatric depression	Rural	22	12.59	2.44
	Urban	29	11.62	3.18
	Total	51	12.04	2.90

In order to find out the significant differences among the institutionalized elderly female in their mobility based on their residence, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.68 Analysis of Variance of the influence of Institutionalized Elderly Female's Residence on their Mobility.**

Dependent Variable	Source	df	SS	MS	F	p
Elderly Mobility	Between groups	1	1.05	1.05	.102	.750*
	Within groups	49	503.11	10.27		
	Total	50	504.16			

\* $p > .05$

It was found that there was no significant effect of the respondents' residence on their mobility ( $F(1, 49) = .102, p > .05$ , Wilks' Lambda = 0.998, partial eta squared = .002).

In order to find out the significant differences among the institutionalized elderly female in their cognitive decline based on their residence, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.69 Analysis of Variance of the influence of Institutionalized Elderly Female's Residence on their Cognitive Decline.**

Dependent Variable	Source	df	SS	MS	F	p
Cognitive Decline	Between groups	1	3.83	3.83	1.41	.240*
	Within groups	49	132.80	2.71		
	Total	50	136.63			

\* $p > .05$

It was found that there was no significant effect of the respondents' residence on their cognitive decline ( $F(1, 49) = 1.41, p > .05$ , Wilks' Lambda = 0.972, partial eta squared = .028).

In order to find out the significant differences among the institutionalized elderly female in their depression based on their residence, analysis of variance statistics was worked out and the results are presented in the following table.

**Table 4.70 Analysis of Variance of the influence of Institutionalized Elderly Female's Residence on their Depression.**

Dependent Variable	Source	df	SS	MS	F	p
Geriatric Depression	Between groups	1	11.78	11.78	1.41	.240*
	Within groups	49	408.15	8.33		
	Total	50	419.92			

\* $p > .05$

It was found that there was no significant effect on the respondents' depression with regard to their residence ( $F(1, 49) = 1.41, p > .05$ , Wilks' Lambda = 0.972, partial eta squared = .028).

**Ha24: The physical problems of Female institutionalised elderly will affect their mobility.**

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

**Table 4.71 The relationship among physical problems of Female Institutionalised Elderly and their mobility,**

Variable	Name of the Disorder	Mobility		Total
		Dependent	Independent	
Physical Problems	Arthritis	03	05	08
	Asthma	03	0	03
	Heart Problems	05	02	07
	Cancer	01	0	01
	Renal Disorders	0	01	01
	Sleeplessness	10	0	10
	More than one problem	15	06	21
Total		37	14	51

Chi – Square Test =  $\frac{N}{df} \frac{Chi-Sq}{P-Value}$

51      6      12.89      .04

A Chi – Square test of independence was performed to examine the relation between physical problems of the Female elderly respondents and their mobility. The relation between these

variables was found to be highly significant,  $\chi^2 (6, N = 51), P < .05$ . It is found that the Female institutionalised elderly with sleeplessness and more than one physical problems show low mobility compared to other physical disorders. Therefore, the hypothesis *Ha7* which states that the physical problems of Female institutionalised elderly will affect their mobility is accepted and concluded that sleeplessness and more than one physical problems influence the mobility of Female institutionalised elderly.

***Ha25: The physical problems of Female institutionalised elderly will affect their Cognitive Decline.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

***Table 4.72 The relationship among physical problems of Female Institutionalised Elderly and their Cognitive decline,***

Variable	Name of the Disorder	Cognitive decline		Total
		Low	High	
Physical Problems	Arthritis	04	04	08
	Asthma	02	01	03
	Heart Problems	01	06	07
	Cancer	0	01	01
	Renal Disorders	01	0	01
	Sleeplessness	04	06	10
	More than one problem	09	12	21
Total		21	30	51

Chi – Square Test =  $\frac{N}{df} \frac{Chi-Sq}{P-Value}$   
 $\frac{51}{6} \frac{5.3}{.50}$

A Chi – Square test of independence was performed to examine the relation between physical problems of the female institutionalised elderly respondents and their cognitive decline. The relation between these variables was found to be Insignificant,  $\chi^2 (6, N = 51), P > .50$ . It is found that the physical problems of female institutionalised elderly do not have a significant relationship with cognitive decline. Therefore, the hypothesis *Ha8* which states that the physical problems of female institutionalised elderly will affect their cognitive decline is rejected and concluded that physical problems do not influence the cognitive decline of female institutionalised elderly.

***Ha26: The physical problems of Female institutionalised elderly will affect their depression.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

***Table 4.73 The relationship among physical problems of Female Institutionalised Elderly and their depression,***

Variable	Name of the Disorder	Geriatric Depression		Total
		Low	High	
Physical Problems	Arthritis	03	05	08
	Asthma	0	03	03
	Heart Problems	01	06	07
	Cancer	0	01	01
	Renal Disorders	0	01	01
	Sleeplessness	02	08	10
	More than one problem	08	13	21
Total		14	37	51

Chi – Square Test = 
$$\begin{array}{cccc} N & df & \text{Chi-Sq} & P\text{-Value} \\ \hline 51 & 6 & 4.3 & .62 \end{array}$$

A Chi – Square test of independence was performed to examine the relation between physical problems of the female institutionalised elderly respondents and their depression. The relation between these variables was found to be Insignificant,  $\chi^2(6, N = 51)$ ,  $P > .62$ . It is found that the physical problems of female institutionalised elderly do not have a significant relationship with depression. Therefore, the hypothesis *Ha9* which states that the physical problems of female institutionalised elderly will affect their depression is rejected and concluded that physical problems do not influence the depression of female institutionalised elderly.

***Ha27: The Psychological problems of Female institutionalised elderly will affect their Mobility.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

**Table 4.74 The relationship among Psychological problems of female Institutionalised Elderly and their Mobility,**

Variable	Name of the Disorder	Mobility		Total
		Dependent	Independent	
Psychological Problems	Death Anxiety	06	01	07
	Worthlessness & Lonely	04	01	05
	More than one problems	27	12	39
Total		37	14	51

*N      df      Chi-Sq      P-Value*

Chi – Square Test = -----

51      2      .96      .61

A Chi – Square test of independence was performed to examine the relation between Psychological problems of the female institutionalised elderly respondents and their mobility. The relation between these variables was found to be Insignificant,  $\chi^2 (2, N = 51), P > .61$ . It is found that the psychological problems of female institutionalised elderly do not have a significant relationship with mobility. Therefore, the hypothesis *Ha10* which states that the Psychological problems of female institutionalised elderly will affect their mobility is rejected and concluded that Psychological problems do not influence the mobility of female institutionalised elderly.

***Ha28: The Psychological problems of Female institutionalised elderly will affect their Cognitive decline.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

**Table 4.75 The relationship among Psychological problems of female Institutionalised Elderly and their Cognitive decline,**

Variable	Name of the Disorder	Cognitive Decline		Total
		Low	High	
Psychological Problems	Death Anxiety	02	05	07
	Worthlessness & Lonely	01	04	05
	More than one problems	18	21	39
Total		21	30	51

	<i>N</i>	<i>df</i>	Chi-Sq	<i>P</i> -Value
Chi – Square Test = -----				
	51	2	1.7	.41

A Chi – Square test of independence was performed to examine the relation between Psychological problems of the female institutionalised elderly respondents and their cognitive decline. The relation between these variables was found to be Insignificant,  $\chi^2 (2, N = 51)$ ,  $P > .41$ . It is found that the psychological problems of female institutionalised elderly do not have a significant relationship with cognitive decline. Therefore, the hypothesis *Ha11* which states that the Psychological problems of female institutionalised elderly will affect their cognitive decline is rejected and concluded that Psychological problems do not influence the cognitive decline of female institutionalised elderly.

***Ha29: The Psychological problems of Female institutionalised elderly will affect their Depression.***

In order to realise the above hypothesis, chi-square statistic was run using SPSS -21.0 and the results are presented in the following table.

***Table 4.76 The relationship among Psychological problems of female Institutionalised Elderly and their depression,***

Variable	Name of the Disorder	Geriatric Depression		Total
		Low	High	
Psychological Problems	Death Anxiety	0	07	07
	Worthlessness & Lonely	01	04	05
	More than one problems	13	26	39
Total		14	37	51

	<i>N</i>	<i>df</i>	Chi-Sq	<i>P</i> -Value
Chi – Square Test = -----				
	51	2	3.4	.17

A Chi – Square test of independence was performed to examine the relation between Psychological problems of the female institutionalised elderly respondents and their depression. The relation between these variables was found to be Insignificant,  $\chi^2 (2, N = 51)$ ,  $P > .17$ . It is found that the psychological problems of female institutionalised elderly do not have a significant relationship with depression. Therefore, the hypothesis *Ha12* which states that the Psychological problems of female institutionalised elderly will affect their depression is rejected and concluded that Psychological problems do not influence the depression of female institutionalised elderly.

## SUMMARY AND CONCLUSION

In this previous chapter the results of the data analysis was presented in tabulations along with discussion of the obtained results. In the present chapter the summary of study, the findings and the conclusion drawn are presented. It is followed by the suggestions for further research.

The purpose of this research was to study the role of physical mobility, Cognitive decline and depression of the institutionalised elderly. Specifically, this study sought to determine the following:-

- The relationship between physical mobility, Cognitive decline and depression of the institutionalised elderly.
- Impact of the demographic variables such as age, sex, education, marital status and residential area of the sample switched on each study variable.

One hundred and fifty institutionalized elderly ( N = 150, women and Men) in Missionaries of Charity ( Mother Teresa Home), Coimbatore , Tamilnadu, India, was purposively selected as sample for this study. Total male were 51 respondents comprising 34%, and total female sample were 99 comprising 66% of the sample. In the overall sample, 139 comprising (93% ) studied upto school education and 11 comprising ( 07% ) completed college education as Under- Graduate and Post- Graduate.

In the overall sample, around 120 comprising ( 80% ) are married, and 30 comprising (20% ) are single. In the overall sample, around 88 comprising ( 59% ) Spouse are alive , and 62 comprising (41% ) spouse are passed away, around 75 comprising of (50%) having One Children, and 75 comprising of (50%) have two or more Children, , around 95 comprising of (63%) resides at urban area, and 55 comprising of (37%) resides at rural area, around 102 comprising of (68%) underwent major surgery in their past, and 48 comprising of ( 32%) had no surgery history in their past, around 19 comprising of (13%) having arthritis problem, 23 comprising of (15%) having Asthma problem, 23 comprising of (15%) having Cardiac problem, 11 comprising of (07%) having Cancer, 10 comprising of (07%) having Renal problem, 19 comprising of (13%) having Insomnia problem, and 45 comprising of (30%) having more one than physiological related problem.

Physical Mobility was measured with a self report Elderly Mobility Scale (EMS) Version – 2 developed by Smith (2000).The Elderly Mobility Scale is a 20 point validated assessment tool for the assessment of frail subjects. The Elderly Mobility Scale is measured on Ordinal scale and specially designed for Institutionalized and Hospitalized elderly.

Elderly Mobility Scale evaluates on individuals mobility problems through seven functional activities including bed mobility, transfers and bodily reaction to perturbation, Speed to sit and stand, Walking speed are analysed. Studies have shown that walking speed diminishes with age and with the average walking speed of healthy women over 75 being 1 metre per second. Increasing age will reduce the walking speed of a person.

Cognitive decline was measured with a self report Global Deterioration Scale developed by Dr. Barry Reisberg ( 2005).The Global deterioration Scale is a 07 point validated assessment tool for the assessment of Cognitive decline of the subjects.

Depression was measured with a self report Geriatric Depression Scale developed by Sherry. A. Greenberg (2005). The Geriatric Depression Scale is a 15 point validated assessment tool for the assessment of Depression of the subjects.

### ***Hypotheses of the study***

The following hypotheses were developed for the research study.

- H01* Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Male will not be correlated with each other.
- H02* Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Female will not be correlated with each other.
- H03* Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their gender.
- H04* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their age.
- H05* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Marital Status.
- H06* Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Spouse Status.
- H07* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Children.
- H08* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Education Level.
- H09* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Siblings.
- H010* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Male will not be influenced by their Residence.
- Ha11:* The physical problems of male institutionalised elderly will affect their mobility.
- Ha12:* The physical problems of male institutionalised elderly will affect their Cognitive decline.
- Ha13:* The physical problems of male institutionalised elderly will affect their depression.
- Ha14:* The Psychological problems of male institutionalised elderly will affect their Mobility.
- Ha15:* The Psychological problems of male institutionalised elderly will affect their Cognitive decline.
- Ha16:* The Psychological problems of male institutionalised elderly will affect their Depression.
- H017* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Age.
- H018* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Marital Status.
- H019* Elderly Mobility, Cognitive Decline and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Spouse Status.
- H020* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Children.
- H021* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Education Level.
- H022* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Siblings.
- H023* Elderly Mobility, Cognitive Decline, and Geriatric Depression of Institutionalized Elderly Female will not be influenced by their Residence.
- Ha24:* The physical problems of Female institutionalised elderly will affect their mobility.



*Ha25:* The physical problems of Female institutionalised elderly will affect their Cognitive Decline.

*Ha26:* The physical problems of Female institutionalised elderly will affect their depression.

*Ha27:* The Psychological problems of Female institutionalised elderly will affect their Mobility.

*Ha28:* The Psychological problems of Female institutionalised elderly will affect their Cognitive decline.

*Ha29:* The Psychological problems of Female institutionalised elderly will affect their Depression.

### ***Overview of Findings***

- When institutionalized elderly male have greater mobility, their cognitive decline is high.
- When institutionalized elderly female have greater mobility, their depression is high.
- There was no significant correlation between cognitive decline of institutionalized elderly male and their depression
- There was no significant correlation between cognitive decline of institutionalized elderly female and their depression
- There was no significant effect of the gender of the respondents on their mobility level
- There was no significant effect of the gender of the respondents on their cognitive decline
- There was a significant effect of the gender of the respondents on their depression level
- There was no significant difference of the respondents' age on their mobility level
- There was no significant effect of the respondents' age on their cognitive decline
- There was no significant difference of the respondents' age on their depression
- There was a significant effect of the respondents' marital status on their mobility
- There was a significant effect of the respondents' marital status on their cognitive decline
- There was no significant difference in depression of the respondents with regard to their marital status
- There was a marginally significant effect of the respondents' spouse status on their mobility
- There was no significant effect of the respondents' spouse status on their cognitive decline
- There was no significant difference in the depression of the respondents with regard to their spouse status
- There was no significant effect of the respondents' children on their mobility
- There was marginally significant effect of the respondents' children on their cognitive decline
- There was no significant effect on the respondents' depression with regard to their children
- There was no significant effect of the respondents' education on their mobility
- There was no significant effect of the respondents' education on their cognitive decline
- There was no significant effect on the respondents' depression with regard to their education level
- There was marginally significant effect of the respondents' siblings on their mobility
- There was no significant effect of the respondents' siblings on their cognitive decline
- There was no significant effect on the respondents' depression with regard to their siblings
- There was a significant effect of the respondents' residence on their mobility
- There was no significant effect of the respondents' residence on their cognitive decline

- There was no significant effect on the respondents' depression with regard to their residence
- Arthritis, Asthma, Heart problems and more than physical problems affect the mobility of male institutionalised elderly
- Heart problems, Cancer and more than one physical problem affect the cognitive decline of male institutionalised elderly.
- Physical problem does not have relationship with depression of male institutionalised elderly.
- Psychological problems do not influence the mobility of male institutionalised elderly
- Psychological problems do not influence the cognitive decline of male institutionalised elderly
- Psychological problems do not influence the depression of male institutionalised elderly.
- There was no significant difference of the respondents' age on their mobility level
- There was no significant effect of the respondents' age on their cognitive decline
- There was a significant difference of the respondents' age on their depression
- There was no significant effect of the respondents' marital status on their mobility
- There was no significant difference in depression of the respondents with regard to their marital status
- There was no significant effect of the respondents' spouse status on their mobility
- There was no significant effect of the respondents' spouse status on their cognitive decline
- There was no significant difference in the depression of the respondents with regard to their spouse status
- There was a significant effect of the respondents' children on their mobility
- There was no significant effect of the respondents' children on their cognitive decline
- There was a significant effect on the respondents' depression with regard to their children
- There was no significant effect of the respondents' education on their mobility
- There was no significant effect of the respondents' education on their cognitive decline
- There was no significant effect on the respondents' depression with regard to their education level
- There was no significant effect of the respondents' siblings on their mobility
- There was no significant effect of the respondents' siblings on their cognitive decline
- There was no significant effect on the respondents' depression with regard to their siblings
- There was no significant effect of the respondents' residence on their mobility
- There was no significant effect of the respondents' residence on their cognitive decline
- There was no significant effect on the respondents' depression with regard to their residence
- Sleeplessness and more than one physical problems influence the mobility of Female institutionalised elderly
- Physical problems do not influence the cognitive decline of female institutionalised elderly
- Physical problems do not influence the depression of female institutionalised elderly.
- Psychological problems do not influence the mobility of female institutionalised elderly.
- Psychological problems do not influence the cognitive decline of female institutionalised elderly.

Psychological problems do not influence the depression of female institutionalised .

## CONCLUSION

In the present investigation, an attempt was made to find out the influence of elderly mobility on their cognitive decline and depression. The study was conducted with an extensive review of literature to establish the hypotheses to carry out the study. The study was carried out with an assumption that the elderly mobility will be correlated positively with the cognitive decline and depression of the aged people. It was found in this study that the result is vice versa. The hypothesis of the gender differences in elderly mobility, cognitive decline and depression of the elderly was tested and found that female elderly people are more depressed than male elderly. The study was carried out with an assumption that demographic variables will influence each of the variables of the study in question. It was found that the marital status, spouse status, number of children, siblings and residence influence the variations in elderly mobility, cognitive declines and geriatric depression of male elderly. Rheumatoid arthritis, asthma, heart problems and male subjects who have more than one physical problem are less mobile, and heart problems, cancer and asthma and multiple physical ailments causes more cognitive decline. With reference to the female elderly subjects, age and number of children are the influencing factors while sleeplessness and multiple physical ailments make them less mobile.

### *Limitations of the Study*

- Data is collected from only one elderly institution in Coimbatore, and the generalization of the present study result is limited.
- There are only limited numbers of elderly institutions in Coimbatore, and therefore random selection of the subject was not possible while collecting the data.
- Elderly people have both physical and psychological problems, which posed problems for the candidate while responding to the instruments used in the study.
- Male and female elderly subjects did not show much involvement in responding to the questions asked by the researcher. This can be taken into consideration while conducting further studies.
- The data collection process extended for longer duration since the elderly subjects were considerably slow while responding.

### *Suggestions for further research*

- The study can be replicated taking the samples from multiple elderly institutions to have more reliable and valid conclusions.
- Each of the variables of the study can be explored separately with elaborate research designs.
- Any study conducted with the elderly subject must be slow in pace as the data collection process needs sufficient time concerning the speed of responding by the elderly subjects.
- An intervention program may be introduced to make elderly people more mobile, which will reduce the cognitive decline and the depression and the effectiveness of the same may be explored. Similarly, the intervention programs for reducing elderly cognitive decline and geriatric depression can be introduced and tested.

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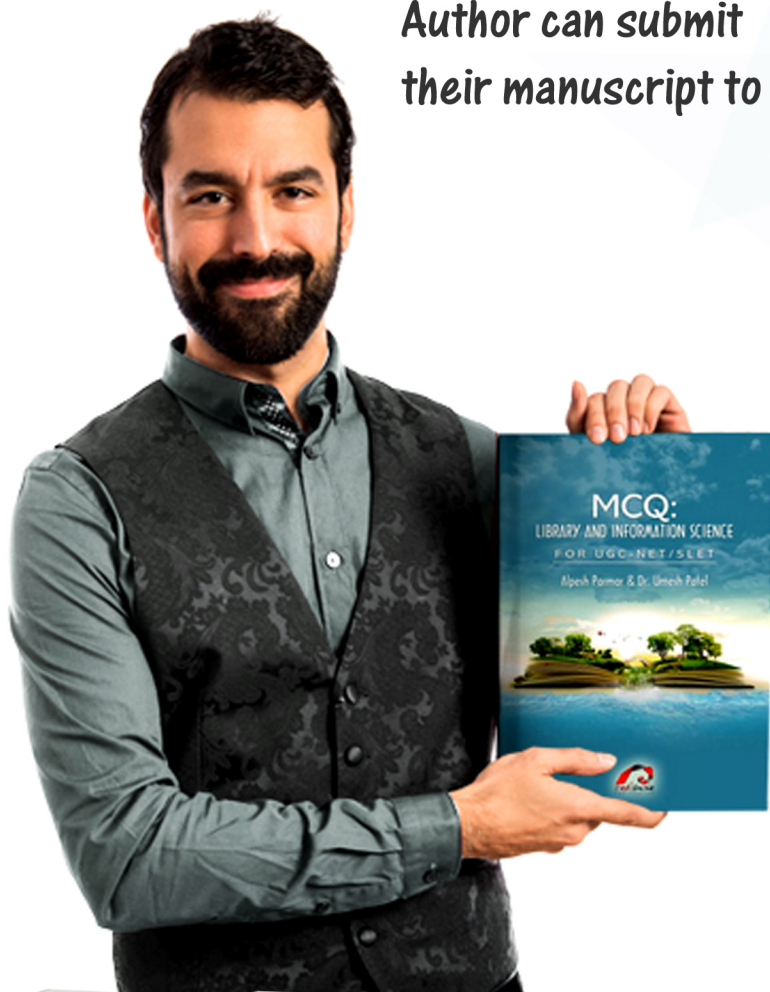
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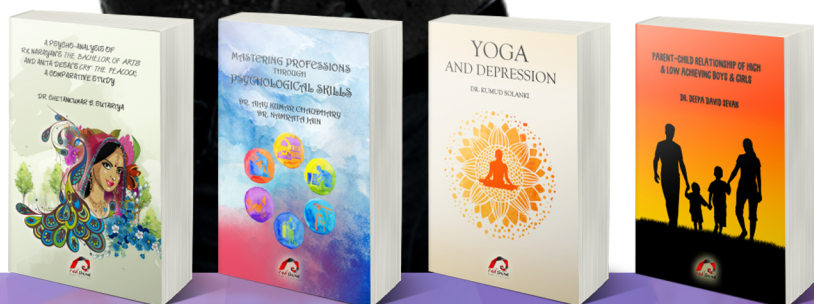
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